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Remarks

Status of the Application

Claims 1-15, 17-24, 27-35, and 37-42 are pending with the entry of this amendment. Claims 1-3, 6, 9-11, 14, 21, 29, 32 and 35 are amended herein.

The Amendments

The amendments to the claims do not add new matter to the application as originally filed.

The Objections to the Drawings

The drawings are objected to under 37 CFR § 1.83(a), for purportedly not showing every feature of the invention specified in the claims. Applicants respectfully traverse. An applicant "is required to furnish a drawing of his or her invention where necessary for the understanding of the subject matter sought to be patented." 37 CFR § 1.81. In the instant case, one of ordinary skill in the art does not require an illustration in order to understand the claimed invention.

The first drawing objection relates to claim 7, and asserts that the drawings are deficient for not showing alignment members having a curved surface as recited in the claim. Alignment members are shown in Figures 1 and 2, for example, as reference numbers 25 and 30. The particular alignment members shown in these figures are rectangular in shape. The specification, however, states that alignment members can "have a curved surface that is in contact with a properly positioned object. The use of a curved surface minimizes the effect of, for example, roughness of the object surface that contacts the alignment member" (paragraph 00040). One of ordinary skill in the art could easily envision using alignment members having a curved edge instead of the rectangular edges shown in the drawings. In fact, claim 8 specifies a particular type of curved surface—a pin—that is suitable for use as an alignment member. Clearly, one of ordinary skill in the art can visualize a pin without need of a drawing. There exists no requirement that a drawing show every possible variation of a structure when such variations are readily understood in the absence of a drawing.

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The second drawing objection pertains to claims 29-34. Claim 29 is directed to automated systems for performing high throughput assays or reactions in microtiter plates in which the automated systems have a) a positioning device, and b) an additional component for performing high-throughput assays. Claims 30-34 recite that the additional components are a robotic device for placing microtiter plates (claims 30 and 33), a liquid dispenser (claims 31 and 34), a retaining device (claim 32). Applicants respectfully submit that robotic devices for handling microtiter plates were well known to those of ordinary skill in the art at the time of Applicants' priority date, as were liquid dispensers. There is no need to include a drawing of these components to understand what is meant by the claims. With respect to the vacuum-actuated retaining device of claim 32, a suitable device is illustrated in Figure 11 of the instant application.

Because the current drawings allow one of ordinary skill in the art to readily understand the claimed invention, Applicants respectfully submit that the objections to the drawings are improper and should be withdrawn.

The Objections to Claims 4-5 and 38

Claims 4-5 and 38 stand objected to for allegedly being of improper dependent format for failing to further limit the subject matter of a previous claim. In particular, the Office Action points out that these claims are directed to microtiter plates, which are not positively recited as part of the claimed device. Applicants respectfully disagree with the merits of the rejection. These claims are directed to features of the *alignment members*, not to features of the microtiter plates. In the device of claim 4, for example, the second alignment member is in contact with a second wall of a microtiter plate, which second wall is an inner wall, when the microtiter plate is placed in the desired position on the positioning device. Similarly, the device of claim 5 includes two or more alignment members that are positioned to contact two different inner walls of a microtiter plate when the plate is placed on the positioning device. Claim 39 is likewise directed to features of the positioning device—the specified components are configured to contact particular walls of microtiter plates when the plates are placed on the positioning device.

The claimed devices are suitable for use with various microtiter plates, so long as the plates have the specified features. The Federal Circuit has pointed out that "there is nothing

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wrong with defining the dimensions of a device in terms of the environment in which it is to be used." *Orthokinetics, Inc. v. Safety Travel Chairs, Inc.*, 1 USPQ2d 1081 (Fed. Cir. 1986). In *Orthokinetics*, to build the claimed travel chair, one must "measure the space between the selected automobile's doorframe and its seat and then dimension the front legs of the travel chair so they will fit in that particular space in that particular automobile." The court noted, however, that the claims were intended to cover the use of the invention with various types of automobiles, and stated that it did not matter that a "particular chair on which the claims read may fit within some automobiles and not others." The court held that "As long as those of ordinary skill in the art realized that the dimensions could be easily obtained, § 112, 2d ¶ requires nothing more. The patent law does not require that all possible lengths corresponding to the spaces in hundreds of different automobiles be listed in the patent, let alone that they be listed in the claims." Similarly, in the instant case, the patent law does not require that all possible microtiter plates be listed in the claims in order to make the claims definite.

The 35 USC § 112, Second Paragraph Rejections

Claims 1-13, 21-24 and 27-31 stand rejected under 35 USC § 112, first paragraph as allegedly being indefinite for omitting essential elements. Applicants have amended claims 1-3, 6, 9-11, 21 and 29 to recite additional elements and cooperative structural connections. The Office Action also asserts that at least two or more elements are required for the precise positioning of a microtiter plate. Applicants have amended claims 1 and 3 to specify that the microtiter plates are in a desired position along a specified axis. These amendments are believed to obviate this ground of rejection.

Claims 14-24 and 27-34 also stand rejected for allegedly being indefinite. In claim 14, it was not clear how a lip surface can be recessed from itself. Applicants have amended claim 14 to recite correctly that it is the interior surface that is recessed from the lip surface.

With respect to claims 29-34, the rejection asserts that it is not clear what constitutes an additional component for performing high-throughput assays. Applicants have amended claims 29 and 32 to omit the term "high-throughput." This claim limitation was unnecessary because the positioning devices are useful in systems for performing any assays or reactions—low throughput or high throughput—in microtiter plates. Applicants believe that with this

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clarification, it is clear that the "additional component" can be any component that is useful for performing assays or reactions in microtiter plates, whether or not such component is specifically recited in the dependent claims. Although the structures recited in claims 30-31 and 33-34 are among these additional components, claims 29 and 32 are not limited to these particular additional components.

The 35 USC § 102 Rejections

Claims 1-9, 12 and 29-30 remain rejected under 35 USC § 102(b) as allegedly being anticipated by Norris (US 5,592,289). The instant Office Action asserts that because "the microtiter plate is not positively recited as an element of the structure, where it is touched by the alignment member(s) has no patentable moment relative to the positively recited structure." Applicants respectfully disagree. As discussed above, it is permissible to use terms in a claim that are relative to an object that is not recited in the claims (for example, the *Orthokinetics* claims directed to travel chairs satisfied 35 U.S.C. § 112, second paragraph even though the car was not positively recited in the claims). In the instant case, if the alignment members are not positioned in the appropriate location, the alignment members cannot contact an inner wall of a microtiter plate. Nevertheless, to expedite prosecution, Applicants have amended independent claims 1, 14, 21, 29, 32 and 35 to positively recite that a microtiter plate is an element of the claims. Applicants reserve the right to pursue claims that lack this claim element in a divisional or continuation application.

With the amendments to recite the microtiter plate as a positive claim element, the claimed invention is distinguished from the device disclosed by Norris in that Applicants' invention "comprises at least a first alignment member that protrudes from the support along the first axis and is in contact with an inner wall of the microtiter plate when the microtiter plate is in a desired position on the support" (claim 1, as amended herein). The device described by Norris has no such structural elements that are positioned to come into contact with an inner wall of a microtiter plate when a microtiter plate is placed on the device.

Claims 1-2 and 12-15 and 17-18 remain rejected under 35 USC § 102(e) as allegedly being anticipated by Bevirt (US 6,063,579). The claimed positioning devices have an alignment member that is "in contact an inner wall of the microtiter plate when the microtiter plate is in a

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desired position on the support." This claim element is not described by Bevirt, so this ground of rejection should be withdrawn for each of rejected claims 1-2 and 12-13.

Claim 14 is directed to a retaining device for retaining a microtiter plate in a desired position on a support, wherein the retaining device comprises a microtiter plate and a vacuum plate that comprises: a) an interior surface, b) that is recessed relative to the lip surface and contacts a perimeter surface of a microtiter plate when the plate is placed in a desired position on the support, and c) a vacuum groove that is disposed between the lip surface and the interior surface. The interior surface is recessed relative to the lip surface. The device described in Bevirt does not have each of these elements. As shown in Figure 5 of Bevirt (reproduced below), the perimeter edge of the microtiter plate is not in contact with any structure of the positioner. Nor does the Bevirt device have a vacuum groove that is disposed between the lip surface and the interior surface. Therefore, claim 14 as currently amended is not anticipated by Bevirt. Nor are claims 15, 17 or 18, each of which depends from claim 14.

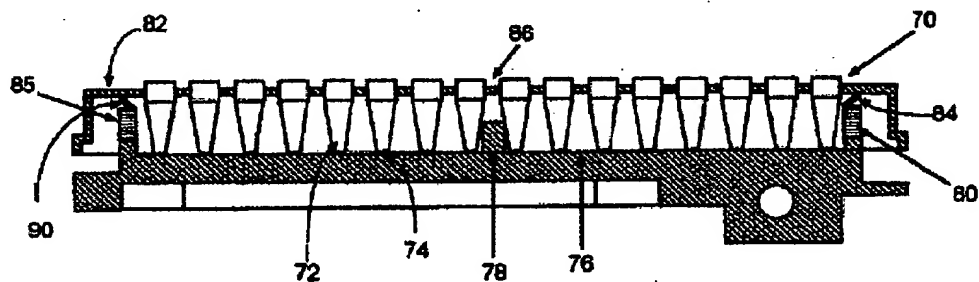


Fig. 5

Claims 1, 3-5, 12, 29 and 31 remain rejected under 35 USC § 102(b) as allegedly being anticipated by Lancaster (US 3,568,735). Applicants respectfully submit that the amendments discussed above obviate this ground of rejection for the same reason as each of the previous anticipation rejections: the cited reference does not describe a positioning device comprising an alignment member that is in contact an inner wall of a microtiter plate, as required by the claims as amended herein. Figure 6 of Lancaster shows that the sides of the locator contact the inside edge of the outer wall of the microtiter plate, and there is no structure in the Lancaster device that is even capable of contacting an inner wall of a microtiter plate. Since

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Lancaster does not describe a positioner in which an alignment member contacts an inner wall of a microtiter plate, the reference does not anticipate claim 1, or any of claims 3-5, 12, 29 and 31, each of which also include this claim element.

The 35 USC § 103(a) Rejections

Claims 13-15, 17-20, 24, 27-28, 30-35, 37-38 and 41 stand rejected under 35 USC § 103(a) as allegedly being unpatentable over Burton or Modlin, and further in view of Cathcart (US 5,443,791), Markin (US 5,417,922) and Bevirt (US 6,063,579). Applicants respectfully traverse this rejection.

Claims 13, 24, 27-28, 30-31, 35, 37-38 and 41 each depend from a claim that requires at least one alignment member that contacts an inner wall of the microtiter plate when the microtiter plate is in a desired position on a support. As discussed above, none of the cited Burton, Modlin, or Bevirt references teaches a device having such a structure. The Cathcart and Markin references likewise fail to teach such a device. Since not all claim elements are described in the cited references, the claims are not *prima facie* obvious.

Claims 14, 15, 17-20, and 32-34 each recite, or depend from a claim that recites, that the device comprises a vacuum plate that comprises a microtiter plate and: i) an interior surface, ii) that is recessed relative to the lip surface and contacts a perimeter surface of a microtiter plate when the plate is placed in a desired position on the support, and iii) a vacuum groove that is disposed between the lip surface and the interior surface. The interior surface is recessed relative to the lip surface. Neither Burton nor Modlin describe a device that has such a structure, as discussed above. The Bevirt, Markin and Cathcart references likewise fail to teach a device having the claimed structure. Consequently, these claims are not obvious over the cited references.

Conclusion

In view of the foregoing, Applicant believes all claims now pending in this Application are in condition for examination. If the Examiner believes a telephone conference

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would expedite prosecution of this application, please telephone the undersigned attorney at 858-812-1547.

Respectfully submitted,



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